

A taxonomic revision of the genus *Pitohui* Lesson, 1831 (Oriolidae), with historical notes on names

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Received 13 May 2013

SUMMARY.—Since 1925, the genus *Pitohui* has included six species: Hooded *Pitohui dichrous*, Variable *P. kirhocephalus*, Crested *P. cristatus*, Black *P. nigrescens*, Rusty *P. ferrugineus* and White-bellied Pitohuis *P. incertus*. Recent molecular work has shown that the genus, as thus circumscribed, is polyphyletic, and includes four different lineages of disparate taxonomic affinities. Here, I review the taxonomic placement of the pitohuis and discuss appropriate names for each taxon. Each monophyletic group has an available generic name, and the true pitohuis (genus *Pitohui*) include only *P. kirhocephalus* and *P. dichrous*. A recommended genus-level taxonomy is proposed, including a new genus-species combination for the Morningbird *Pachycephala teubrosa* of Palau.

The genus *Pitohui* currently includes six species of medium-sized (60–100 g) forest-dwelling birds restricted to New Guinea and nearby continental islands. They are: Hooded Pitohui *Pitohui dichrous*, Variable Pitohui *P. kirhocephalus*, Crested Pitohui *P. cristatus*, Black Pitohui *P. nigrescens*, Rusty Pitohui *P. ferrugineus* and White-bellied Pitohui *P. incertus* (Stresemann 1925, Mayr 1941). All have jay-like omnivorous habits, are gregarious (Diamond 1987) and recent work has demonstrated that they carry potent neurotoxins in their skin and feathers that may function in chemical defence in some species (Dumbacher *et al.* 1992, 2000, Dumbacher 1999). Because of recent interest in the evolution of toxicity, they have been the subject of phylogenetic studies (Dumbacher & Fleischer 2001, Jönsson *et al.* 2007, Dumbacher *et al.* 2008); these have suggested that the genus *Pitohui* is currently misclassified. Below, I summarise the taxonomic history of the genus and propose a classification based upon the most recent available genetic data.

Variable Pitohui *Pitohui kirhocephalus* (Lesson & Garnot, 1827) was first described in 1827 in the zoological reports of the French exploration ship, the *Coquille* (Lesson & Garnot 1827), which sailed in 1822–25. The ship's zoological findings were published in several volumes and an atlas (Lesson & Garnot 1826–30), in which the written description of this species was given under the name *Vanga kirhocephalus* in livr. 14, pp. 632–633, attributed to Lesson alone. Zimmer (1926) reported that this part was published on 9 January 1930. However, a figure of the species was published earlier under the authorship of Lesson & Garnot with the name 'Pie-grièche cap-gris *Lanius kirhocephalus*' on pl. 11 of the Atlas, released on 17 January 1827 (Zimmer 1926). Thus, this name has precedence, with Lesson & Garnot as authors (ICZN 1999: Art. 12.2.7). In his written description, Lesson recorded that 'Le vanga cap-gris habite les forêts de la Nouvelle-Guinée, aux alentours de Doréry, où les Papous le nomment *Pitohoui*.' Thereafter, Lesson (1831) recognised the distinctness of the grey-capped bird and placed it in a new genus, *Pitohui*. No explanation was given for the origin of the name, but it presumably came from the local 'pitohoui' used by New Guinean villagers near Dorey (now Manokwari), New Guinea, Indonesia (Lesson & Garnot 1827). Thus, the name is properly cited as *Pitohui kirhocephalus* (Lesson & Garnot, 1827).

In 1850, Reichenbach proposed the name *Rectes* for this genus in his *Avium systema naturale*, but proffered no explanation for the name change, just a single black-and-white

figure (no. 65) derived from Lesson & Garnot (1827), with the caption '*Rectes*'. At the time, no other species in the genus was described, so *Rectes* was proposed effectively as a replacement name for *Pitohui*, with *P. kirhocephalus* the type species by monotypy. Shortly thereafter, Bonaparte (1850) supported this, saying of *P. kirhocephalus*, 'C'est le type d'un genre distinct pour lequel nous préférons adopter le nom de *Rectes*, proposé par Reichenbach.' Bonaparte (1850) also added two other species to the genus *Rectes*, *R. dichrous* and *R. ferrugineus*, but *P. kirhocephalus* remained the type species as confirmed by multiple authors (Gray 1855, Salvadori 1881, Sharpe 1877). Although no justification was provided for their preference for *Rectes*, it was customary among taxonomists at the time to prefer scientific names with Latin roots over those without and to provide new names for those that had been 'improperly' formed. Sharpe later confirmed that '*Pitohui* is doubtless an older name than *Rectes*, but can surely be laid aside as a barbarous word' (Sharpe 1903).

The genus *Rectes* was in general usage after 1850, and two additional species were discovered and added to it, *Rectes nigrescens*, Black Pitohui (Schlegel, 1871), and *R. cristatus*, Crested Pitohui (Salvadori, 1875). When Rothschild & Hartert (1903) resurrected the name *Pitohui* for the genus, they treated all other generic names that had been proposed for its various species as synonyms. Stresemann (1925) then reduced the number of species recognised by Sharpe (1877), Salvadori (1881) and others from 16 to six, relegating many taxa to subspecies but accepting those mentioned above and *P. incertus* van Oort (1909). For the remainder of the 20th century, the genus *Pitohui* was restricted to the above six species (Mayr 1941, Rand & Gilliard 1967, Beehler & Finch 1985, Beehler *et al.* 1986).

But generic dismemberment had been foreshadowed. *Pseudorectes* was introduced by Sharpe (1877) for Rusty Pitohui *Pitohui ferrugineus* (C. L. Bonaparte, 1850). With *Rectes ferrugineus* as its type species, *Pseudorectes* is a valid available name for the genus now known to include the species *ferrugineus* and *incertus* (Dumbacher *et al.* 2008). In recent phylogenies, *Pseudorectes* is strongly supported as a monophyletic genus sister to *Colluricincla* (shrike-thrushes) and distant from *Pitohui* (*P. kirhocephalus*) at family level (Jonsson *et al.* 2007, Dumbacher *et al.* 2008).

Black Pitohui *Rectes nigrescens* Schlegel, 1871, was also placed in its own genus, *Melanorectes*, by Sharpe (1877). Recent molecular work has shown that it too is not closely related to *Pitohui* but is sister to the whistler genus *Pachycephala* (Jonsson *et al.* 2007, Dumbacher *et al.* 2008) and should be recognised generically as well.

Crested Pitohui has also been recognised as distinct, and Iredale (1956) proposed the generic name *Ornorectes* for it. Molecular analysis has revealed that Crested Pitohui is most closely related to Crested Bellbird *Oreoica gutturalis* of Australia and Rufous-naped Whistler *Aleadryas rufinucha* of New Guinea (Jonsson *et al.* 2007, Dumbacher *et al.* 2008). Nevertheless, it is quite distinct morphologically and behaviourally from these relatives, so recognition of *Ornorectes* is recommended and the genus has recently been resurrected (Norman *et al.* 2009). These three taxa—*Oreoica*, *Aleadryas* and *Ornorectes*—have historically been placed in the polyphyletic Pachycephalidae or, possibly incorrectly, in the Colluricinclidae. Recent analyses suggest that they are distantly related to other members of the basal core Corvoidea, and the family name Oreocidae has been applied to this group (Norman *et al.* 2009).

Molecular work also suggests that *P. kirhocephalus* and *P. dichrous* are indeed sister taxa (Dumbacher & Fleischer 2001, Jonsson *et al.* 2007, Dumbacher *et al.* 2008) and that this clade is probably a basal member of the Oriolidae, and perhaps sister to the figbirds, *Sphecotheres* Vieillot (Jonsson *et al.* 2010). Thus, the genus *Pitohui* contains only *P. dichrous* and *P. kirhocephalus*, and the best-available data place *Pitohui* within the Oriolidae, although more work is needed to confirm this.

I recommend that common names remain unchanged, because, although the 'pitohuis' are not monophyletic, they do form an ecological group, much like warblers around the world that are not monophyletic either. Pitohuis also resemble one another in their use of potent toxins (Dumbacher *et al.* 1992, 2000, 2008), in their participation and movements in mixed-species flocks (Diamond 1987), their geographic restriction to New Guinea, and in morphology and other behaviours (Stresemann 1925). The only proposal for an alternative common name has been 'wood-shrike' (Iredale 1956), an epithet already in use for *Tephrodoris* (Prionopidae).

The Morningbird (*Rectes tenebrosus* Hartlaub & Finsch, 1868) of Palau has been placed with the genus *Pitohui* by some authors. Although currently placed in *Colluricincla*, two independent DNA studies suggest that it is nested well within the whistler clade, *Pachycephala* (Dumbacher *et al.* 2008, Jönsson *et al.* 2008), and should be transferred to that genus.

A recommended taxonomy of pitohuis follows:

Family Oriolidae

Genus *Pitohui* Lesson, 1831

Pitohui dichrous (Bonaparte, 1850), Hooded Pitohui

Pitohui kirhocephalus (Lesson & Garnot, 1827), Variable Pitohui

Family Colluricinclidae

Genus *Pseudorectes* Sharpe, 1877

Pseudorectes ferrugineus (C. L. Bonaparte, 1850), Rusty Pitohui

Pseudorectes incertus (van Oort, 1909), White-bellied Pitohui

Family Pachycephalidae

Genus *Melanorectes* Sharpe, 1877

Melanorectes nigrescens (Schlegel, 1871), Black Pitohui

Genus *Pachycephala* Vigors, 1825

Pachycephala tenebrosa (Hartlaub & Finsch 1868), Morningbird (nov. comb.)

Family Oreoicidae

Genus *Ornorectes* Iredale, 1956

Ornorectes cristata (Salvadori, 1875), Crested Pitohui

Acknowledgements

I thank the editor, Guy Kirwan, for his help with this manuscript, and several people who read earlier drafts or provided critical reviews, including Bruce Beehler, Guy Dutton, Thane Pratt, Wojciech J. Pulawski and Richard Schodde.

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